Transport Canada Transports Canada

TP 1624

Marine Casualty Investigations

Enquêtes sur les accidents maritimes

Investigation Report to the Minister pursuant to sections 542 or 545 of the Canada Shipping Act

Rapport d'investigation au Ministre conformément aux articles 542 ou 545 de la Loi sur la marine marchande du Canada

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REPORT OF INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE SINKING OF THE FISHING VESSEL "JEAN B" OFF PINE ISLAND IN QUEEN CHARLOTTE STRAIT, BRITISH COLUMBIA, ON FEBRUARY 19, 1986.

REPORT No. 447

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REPORT OF INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE SINKING OF THE FISHING VESSEL "JEAN B" OFF PINE ISLAND IN QUEEN CHARLOTTE STRAIT, BRITISH COLUMBIA, ON FEBRUARY 19, 1986.

Particulars of Vessel

Name	"JEAN B"
Official Number	176662
Canadian Fishing Vessel No.	23396
Port of Registry	Victoria, B.C.
Gross Tonnage	14
Net Tonnage	10
Length- OA	12.85 m
Breadth	4.27 m
Depth	1.52 m
Type of Vessel	Troller, wooden
Built	1946, Victoria, B.C.
Propulsion	'Gardner' Diesel Engine Model 6 LW, 62.7 kW (84 b.h.p.) bridge controlled and driving a single fixed pitch propeller
Cargo	7 tons of grocery supplies
Crew	3
Owner	Richard Frederick Galley R.R. #5, Site 13, C15, Kelowna, B.C.

Navigation Equipment

Radar	Furuno, 24 miles (32 V)
Echo Sounder	Furuno, F860 White Line

Radiotelephones (3)	Realistic TRC 421 C/B Daniels DE 440 A/M Modar VHF, C/W Bearcat Scanner 300
Compass	Sestrel
Autopilot	Wagner MK IV Electric

Life-saving Equipment

Lifeboat (1)	2.44 m (8 ft) Sport-Yak
Lifejackets (1)	type unknown
Floater Jackets (2)	Mustang
Flares	supplied, quantity & type unknown

NOTE: 1. All times in this report are expressed in Pacific Standard time (UTC minus 8 hours) unless otherwise stated.

2. A glossary of abbreviations and terms can be found following the Findings in this report.

Background

The fishing vessel "JEAN B" departed Port Hardy Government wharf at 0200 on February 19, 1986 bound for Bella Bella, B.C., with a cargo of approximately 7 tons of potatoes and vegetables in sacks.

The weather on departure was calm but a gale warning was forecast for the Queen Charlotte Strait later in the day.

At 0418, a 'MAYDAY' was received by CGRS Bull Harbour from the "JEAN B" indicating that the vessel was taking on water and in danger of sinking. Approximately 40 minutes later, in rough seas and strong winds, the "JEAN B" sank in estimated position latitude 50° 58.5'N, longitude 127°44.4'W, one-half mile west of Pine Island.

Of the three people on board, two were found dead by search and rescue vessels some 5 hours after the sinking and a third person is still missing.

No pollution was reported following this incident.

Particulars of Deceased Persons

Name	Richard Frederick Galley
Position on board	Owner and Operator of the "JEAN B"
Age	43
Address	Kelowna, B.C.
Cause of Death	Drowning

Name	Derk Marinus
Position on board	Crewmember
Age	33
Address	Bella Bella, B.C.
Cause of Death	Drowning

Particulars of Missing Person

Name	Norman Chamberlaine
Position on board	Deck-hand
Age	28
Address	Bella Bella, B.C.
Cause of Death	Missing and presumed drowned

Narrative

The "JEAN B" arrived at Port Hardy Government Wharf (known as the Seagate Wharf by local residents) at 0300 on February 18, 1986, from Bella Bella. The afternoon of February 18 was spent doing minor repairs to the engine while the crew waited for their cargo of groceries to arrive by truck from Comox.

The loading of the cargo, consisting of 250 x 22.68 kg sacks of potatoes, 18 x 22.68 kg sacks of mixed vegetables and 6 x 11.34 kg sacks of beets, was commenced at 2100 that evening. The three crewmembers were stowing the cargo on board the vessel while three more persons helped to unload

from the truck. Approximately 190 sacks of potatoes were stowed in the fish hold and a few smaller sacks of vegetables were used to fill the hold to capacity; 20 sacks of potatoes were stowed in the aft compartment (lazaret) filling it; 40 sacks of potatoes were also stowed in the forward accommodation space and the remaining sacks of mixed vegetables were stowed at random and distributed between the wheel-house and the forward accommodation space. Loading was completed by 2230 on February 18.

In addition, there was a delicatessen counter of the kind used to display meat products, weighing approximately 250 kg which was stowed on deck between the after part of the hatch cover and the stern of the vessel. A foam and fibreglass hatch cover was fitted above the hold opening but it is not known if it had been lashed down.

When the loading was completed, all those who participated in the operation, six people in all, went to have coffee in a local restaurant, owned by a friend of the vessel's owner.

It was reported that one of the crewmembers of the "JEAN B" remarked that should the weather deteriorate, he might have to fly back to Bella Bella in order to operate his Bakery.

Shortly after 2300, everyone separated and the three crewmembers of the "JEAN B" returned to the vessel.

There is no further information available as to what took place between 2300, February 18 and 0200, February 19 but the "JEAN B" was seen by another fisherman, leaving the government wharf at around 0200 on February 19, heading out to sea.

The local weather in Port Hardy and at Pine Island at the time of departure of the "JEAN B" was good with calm winds and a low westerly swell at Pine Island. The forecast called for south-easterly winds 15 to 25 knots in Queen Charlotte and Johnstone Straits; a gale warning was continued for the west coast of Vancouver Island.

At 0418, a call was received by CGRS Bull Harbour on channel 16 from the "JEAN B" reporting that she was a 42 foot (12.8 m) troller with 3 persons on board and going down in a position 2 nautical miles off Pine Island.

At 0422, a 'MAYDAY' relay was broadcast by CGRS Bull Harbour and the "BULL HARBOUR" lifeboat was tasked at 0424.

At 0425, the Canadian Coast Guard cutter "RACER" and the Institute of Ocean Sciences vessel "PARIZEAU" were tasked. The log carrier "HAIDA BRAVE" and the tug "NORTH ARM CHAMPION" responded to the 'MAYDAY' and were tasked at 0431 and 0435 respectively. A Buffalo aircraft, 'R-456', from Squadron 442 Base at Comox, was tasked at 0505.

At the time of the original 'MAYDAY' call, the "JEAN B" gave her position as being 2 nautical miles off Pine Island. At 0421, in response to a further query from the Pine Island lighthouse keeper for a more exact position, the operator of the "JEAN B" reported his position as 1 3/4 nautical miles north-west of the light by radar. At 0427, the "JEAN B" reported her position as 1/2 nautical mile off Pine Island and heading straight for the light.

Weather conditions as reported were a cloudy sky, wind from the south-east at 26 knots and gusting, and the sea was moderate with waves 1.5 m high.

At 0431, the operator of the "JEAN B" asked the Pine Island lightkeeper about the possibility of beaching the vessel as she was down by the stern and the pumps could not keep up. He was advised that there is a small cove by the light where people could get off. The "JEAN B" acknowledged this information and reported that water was now entering the forward compartment.

A short time prior to the above conversation, the lighthouse keeper asked the operator of the "JEAN B" what life-saving equipment he had on board, and was told that the vessel carried two floater jackets, one lifejacket, flares and a small dinghy.

At 0434, the "JEAN B" lost engine power and a decision was made to abandon the vessel as she was approximately 200 m from Pine Island.

At 0439, the "JEAN B" called Pine Island to report that the crew had attempted to abandon ship but that the small dinghy had sunk and they had managed to get back on board the still floating "JEAN B". A crewmember had lost his life-jacket and the flares had also been lost in the attempt. The crew was advised by the Alert Bay radio operator to stay with their boat.

At 0444, CGRS Alert Bay advised the crew of the "JEAN B" that the ETA for the "BULL HARBOUR" lifeboat was one hour.

At this same time, one of the lightkeepers at the Pine Island Light Station went to the helicopter pad with a

lantern and a portable VHF. The crew of the "JEAN B" was asked if they could see the lantern which he was moving in an East-West direction. They replied that they could see the light but that they were drifting out to sea. At no time was the "JEAN B" visible by anyone since she had lost electrical power for her lights as reported shortly after the 'MAYDAY' call.

At 0455, all contact with the "JEAN B" was lost. The lightkeeper kept the light shining on the beach and stayed in radio contact with the Coast Guard Radio Stations and the "BULL HARBOUR" lifeboat.

At 0530, the "BULL HARBOUR" lifeboat advised RCC via CGRS Alert Bay that a target could be seen on radar in a position one-half mile west of Pine Island. At 0543, the vessel was on scene one mile south-west of Pine Island; speed was reduced and a search was started with the help of searchlights. At 0544, the target was lost on radar and a 'datum marker buoy' was deployed and an expanding square search was started around it.

The weather was south-easterly winds at 24 knots with 2 m seas and at 0650, the sea conditions had increased to 3 m waves and south-east winds of 30 to 35 knots.

At 0705, the CCGC "RACER" arrived on scene and took over the role of On-Scene Commander from the "BULL HARBOUR" lifeboat.

At 0718, a 'scotsman' float was picked up in position Storm Islands, north-west point bearing 085°T x 2.54 miles.

At 0720, the Buffalo 'R-456' arrived on scene and the "HAIDA BRAVE", tasked at 0431, arrived on scene at 0722.

At 0725, a propane tank was picked up in the same area and a blue hatch board 60 cm x 15 cm was spotted but could not be taken on board.

Between 0850 and 0920 a cockpit cover, 3 orange sacks of onions and an orange dinghy were recovered in approximate position Storm Islands bearing 070°T x 2.36 miles.

At 0855, the aircraft sighted a skiff and objects that appeared to be lifejackets. The "RACER" proceeded to the scene of the sightings and recovered two bodies in floater jackets. Both bodies were close together in position latitude 51°01.4'N, longitude 127°47.4'W, approximately two miles west of Storm Islands.

A large blue hatch cover about 0.9 m^2 (10 ft^2) was also sighted at the same time and was left adrift to serve as a 'datum marker buoy'.

At 0942, the "HAIDA BRAVE" was stood down. At 1057, the CCGC "RACER" was stood down and proceeded to Port Hardy where she docked at 1338 and at 1345, the bodies of the two crewmembers were handed over to the RCMP

At 1059, the "BULL HARBOUR" lifeboat was stood down. The wind had increased to 40-50 knots from the south-east with 3 m seas and breaking waves.

The "PARIZEAU" which had remained on the scene to continue the search was stood down at 1510 due to the severity of the weather.

At 1545, the search was reduced due to extremely poor search conditions and impending darkness and the incident was turned over to the RCMP as a missing person case.

The search resumed at 0900 on February 20 with the tasking of and the CCGC "RACER" and the Buffalo aircraft 'R-456' from 442 Squadron in Comox.

At 1621 on February 20, the RCMP in Port Hardy were briefed and the search was placed on 'reduced status'.

Analysis

1. History

The "JEAN B" was bought by the present owner in 1981. The vessel at that time was in a state of neglect and was equipped as a troller.

The new owner continued to use the vessel as a troller and fished for salmon along the West Coast from July until October. During the winter months he lived aboard the vessel, making the occasional trip as circumstances allowed.

The "JEAN B" had been built in 1946 and her last known dry-docking was in June 1978; she was due to be dry-docked in the spring of 1986.

2. Certification

Being under 15 tons gross tonnage, the fishing vessel "JEAN B" was not inspected by the Ship Safety Branch of the Canadian Coast Guard and neither was she required to

be.

As she was a vessel less than 300 tons gross and less than 20 m in length, it was not compulsory that she be fitted with a VHF radiotelephone; she was however voluntarily fitted with one.

3. **Life-Saving Equipment**

The "JEAN B" came under Part II of the Small Fishing Vessel Inspection Regulations and was required to carry the following life-saving equipment:

- one approved lifejacket for each person on board;
- a sufficient number of lifeboats, boats, dories, skiffs or seine skiffs to accommodate all persons on board the vessel;
- one watertight can containing six approved self-igniting red flares.

Compliance with the Regulations is the responsibility of the owner and master.

It appears that the "JEAN B" had only one lifejacket and two floater jackets. The lifejacket was worn by the missing crewmember and was lost when he attempted to board the dinghy. The lifejacket has not been recovered and, therefore, its type and the regulations under which it had been approved is not known.

The standard keyhole lifejacket is the only lifejacket approved under the Life Saving Equipment Regulations, and is designed so that it will keep the face of the wearer above the water, when unconscious. The floater jackets are not approved and although they were sufficient to keep the two persons afloat, the two bodies were found floating face down and with their heads immersed in water.

The small plastic dinghy (see photograph, Annex I), did not comply with the requirements of a life-saving apparatus as specified in the Small Fishing Vessel Inspection Regulations in that the capacity plate on the inboard side of the dinghy restricted the complement of occupants to "2 persons or 265 lbs". Three people were aboard the "JEAN B" and trying to board the small dinghy when it sank beneath them.

4. Weather

A gale warning issued by Environment Canada at 2210 on February 18, for Queen Charlotte Sound and Hecate Strait was as follows:

> A 996 millibar low 180 miles west of Langara will move to near Port Hardy Wednesday afternoon and deepen to 992 millibars. Gale force winds will develop in the above areas after midnight and continue into Wednesday afternoon.

This warning was broadcast at 2233 on February 18 and was rebroadcast at 2250 by CGRS Bull Harbour. It was also broadcast by CGRS Alert Bay at 2241 and put on CMB at 2246.

A marine forecast for B.C. coastal waters issued by Environment Canada at 1045 PST, February 18 stated:

> QUEEN CHARLOTTE STRAIT
> JOHNSTONE STRAIT
>
> Winds south-east 10 to 20 knots with easterly outflow winds 15 to 25 in mainland inlets. Winds increasing to south-east 15 to 25 overnight and increasing to 30 Wednesday morning.
>
> Mostly cloudy. Frequent snow showers reducing visibilities to 1 to 4 miles at times.
>
> Outlook. Strong south-easterlies.

This forecast was received by CGRS Alert Bay at 2257 and put on CMB at 2303, February 18.

CGRS Bull Harbour had broadcast this forecast at 2255.

A gale warning issued by Environment Canada at 0245 PST, February 19, for JOHNSTONE STRAIT, QUEEN CHARLOTTE STRAIT indicated:

> A 998 millibar low 180 miles west of Langara will move to 100 miles north-west of Port Hardy Thursday morning. Gale force outflow winds are forecast to develop well ahead of the low..likely near dawn this morning. Gales will become

> widespread through the Straits this evening as the low moves to within 250 miles of the regions.

This warning was broadcast by CGRS Bull Harbour at 0303 and by CGRS Alert Bay, while taping it for the CMB, at 0307.

The local weather for Pine Island issued at 2200 on February 18 was broadcast on CMB by CGRS Alert Bay at 2200 with a report of calm winds, rippled sea and a low westerly swell.

The next local weather for Pine Island was issued at 0400 on February 19 and reported winds from the south-east at 26 knots and gusting, 1.8 m (6 ft) high seas with a moderate westerly swell.

When the "JEAN B" departed Port Hardy around 0200 on February 19, there was ample warning of gale force winds for the area where she was heading.

At an estimated speed of 9 knots, and assuming that the intended track of the vessel was the route normally taken by local fishermen, the "JEAN B" should have been entering Christie Pass at around 0300 when the gale warning for the Queen Charlotte and Johnstone Straits was broadcast.

5. Stability

Being a vessel under 15 tons gross, the "JEAN B" was not required to be built under plans approved by the Ship Safety Branch of the Canadian Coast Guard and there is no record that an inclining experiment was ever conducted to assess her stability. However, after forty years of sailing on the B.C. coast, it can be assumed that her stability was adequate.

A friend of the owner, who assisted with the loading of the vessel, estimated that 5 tons of cargo were loaded in the fish hold, filling it, and one-half ton was needed to fill the aft compartment. The normal load of fish that the vessel would carry was approximately 10 tons in the fish hold. The cargo of potatoes and mixed vegetables was mostly stowed in the fish hold, the after hold and the forward accommodation, with a few bags left in the wheel-house because of the cold weather outside.

It is an accepted local custom for some fishboats to carry cargoes of groceries for the local residents when

the fishing season is over. This transport is done at a local level, and then only occasionally, when a group of people might join together to purchase goods in bulk at lower cost.

Because the transporting of such cargoes is rare and constitutes such a small percentage of the vessels' revenues as to be negligible, the Coast Guard does not regard these vessels as coming under the definition of a cargo ship as defined in the Canada Shipping Act, which reads:

> "cargo ship" means a ship that is not a fishing vessel, a passenger ship or a pleasure craft;

Since there was no report that the vessel was listing and it was reported by the operator that the vessel was going down by the stern, it does not appear that transverse stability was a factor in this casualty.

6. **Heading for Shelter**

At 0418, during the initial 'MAYDAY' call, the "JEAN B" reported her position as being two nautical miles off Pine Island.

At the request of the Pine Island lightkeeper, a more accurate description of her position by radar, was given as being one and three-quarters (1 3/4) nautical miles north-west of Pine Island Light at 0421.

At 0427, the position was reported as being one-half (1/2) nautical mile by radar off Pine Island Light.

The elapsed time between the two positions is 6 minutes, giving the "JEAN B" an estimated speed over the ground of 12.5 knots while heading against the seas and wind.

An average speed for that type of vessel is approximately 8 knots and this has been confirmed by various fishermen and a friend of the owner. Considering the possibility that the range rings on the radar might have been misread, a more probable position at 0427 could have been one nautical mile from Pine Island Light, giving the "JEAN B" a speed of 6.25 knots which seems more realistic in the circumstances.

With the vessel maintaining her speed of 6.25 knots and her engine ceasing to function at 0434, she would then have been in a position about 40 m from Pine Island.

When reporting to Pine Island that his engine had ceased functioning, the operator of the "JEAN B" indicated that the estimated distance from the light was no more than 200 m.

These positions tend to confirm the assumption that the radar echo, one-half (1/2) nautical mile west of Pine Island, observed on the radar screen aboard the "BULL HARBOUR" lifeboat at 0530, might have been the bow of the "JEAN B" that had been drifting westward for about one hour. The drift caused by the strong south-easterlies would have been reduced by the drag of the half submerged vessel and the small flood tide.

The effect of the tide is assumed to have been minimal as it had turned to flood at 0245 with a rise of 1.2 m at Alert Bay.

7. Sinking

In the first radio communication with CGRS Bull Harbour, the "JEAN B" reported taking on water and that they could not keep her up much longer. They had lost their power supply for the lights but still had power for the VHF and the radar. Sixteen minutes later, the vessel reported that water was entering the forward compartment.

It appears from this information that the "JEAN B" started to take on water from the stern area of the vessel but it is not known how long the vessel was taking water before the situation became critical; nevertheless, it appears that by 0418, the situation had become uncontrollable. The vessel was taking more water than her pumps could handle. The vessel was fitted with one 3.2 cm (1 1/4 in) Jabsco main engine driven pump and two small electric pumps on deck.

No remarks were made by the crew regarding the weather or the size of the waves thus giving no reason to believe that the vessel was swamped.

The "JEAN B" appears to have gradually sunk by the stern with the rate of sinking being reduced by the forward motion of the vessel. With the loss of her engine power in a position approximately 200 m from Pine Island, she probably remained afloat because of air being trapped in her bow (forward accommodation).

The latest information that is available on the number, capacity and condition of the pumps is from an insur-

ance survey by the Government of Canada, Fisheries and Oceans which was made in July 1982. Since the owner/operator did most of the work on his vessel by himself, there is no record available of any changes or problems to the vessel or her equipment.

The opinions forwarded by other people who knew the vessel and the owner on a casual basis tend to agree that it was fairly well maintained and appeared seaworthy.

8. Possible Causes of Sinking

The owner/operator indicated that the vessel was taking on water but the reasons are not known. However, there are several possibilities, the most likely alternatives, or combinations thereof, being:

- the stern gland failed;
- the vessel struck a deadhead or other obstruction causing underwater hull damage;
- a leak or leaks developed in the hull due to the cargo loading and working of the planking;
- the dry topside planking leaked; or
- the deck cargo (delicatessen counter) shifted and damaged deck fittings/hull.

9. Radiotelephone

The "JEAN B" was voluntarily fitted with a VHF radiotelephone, duly licenced as per Part IV, Section 70 (3) of the Ship Station Technical Regulations.

There is no record of the owner/operator of the "JEAN B" having been issued a Radiotelephone Operator's Restricted Certificate (Maritime Voluntary) by the Department of Communications. He was required to hold such a certificate under Part II, section 65 (3) of the Ship Station Technical Regulations.

(For excerpt of regulation see Annex II).

10. Search and Rescue

The units that were tasked and participated in the search for the "JEAN B" were "BULL HARBOUR" lifeboat, CCGC "RACER", Institute of Ocean Sciences vessel

"PARIZEAU", Log Carrier "HAIDA BRAVE", Tug "NORTH ARM CHAMPION", one CMRA vessel; Buffalo aircraft 'R-456', and two Labrador Helicopters from 442 Squadron, Comox.

As the light station at Pine Island was not equipped with a suitable boat, the lightkeepers could only monitor the situation and render assistance in communications.

The air and sea temperatures at the time of the casualty were reported as being -5°C and +3°C, respectively.

Various studies have shown that under the temperature conditions just mentioned, an average adult wearing a flotation device would suffer hypothermia but would have a strong chance of survival if rescued within half an hour; immersion of approximately one hour or more would probably be fatal. (See Annex III).

The above estimates would vary depending upon an individual's age, physical condition and any sustained injuries. Immersion suits are known to significantly extend the expected time of survival.

11. **Cause of Death**

An autopsy performed on each of the two victims (i.e. the two recovered bodies) revealed the cause of death to be "salt water drowning as a consequence of hypothermia". The toxicological results were negative in both victims.

12. **Crew Experience**

The owner and operator of the "JEAN B" who purchased the vessel in 1981, had been fishing on the West Coast for over 10 years. He was known to be an experienced and knowledgeable fisherman and sailor.

The two other crewmembers were friends of the owner and although they had some fishing and sea experience, they were not fishermen by trade - one was a baker in Bella Bella and the other was a mill-hand.

Findings

The vessel sank in gale conditions from an intake of water, the cause of which is unknown.

It would appear that the following factor contributed to the casualty:

- imprudent action in taking a well-loaded small vessel to sea despite a gale warning, knowing the vessel would have to traverse an exposed area, notorious for its dangerous sea conditions.

It would also appear that the deaths of the crewmembers could be attributed to:

- the failure to comply with the provisions of the Small Fishing Vessel Inspection Regulations in that the vessel did not carry a sufficient number of approved lifejackets or a lifeboat capable of carrying all the crewmembers.

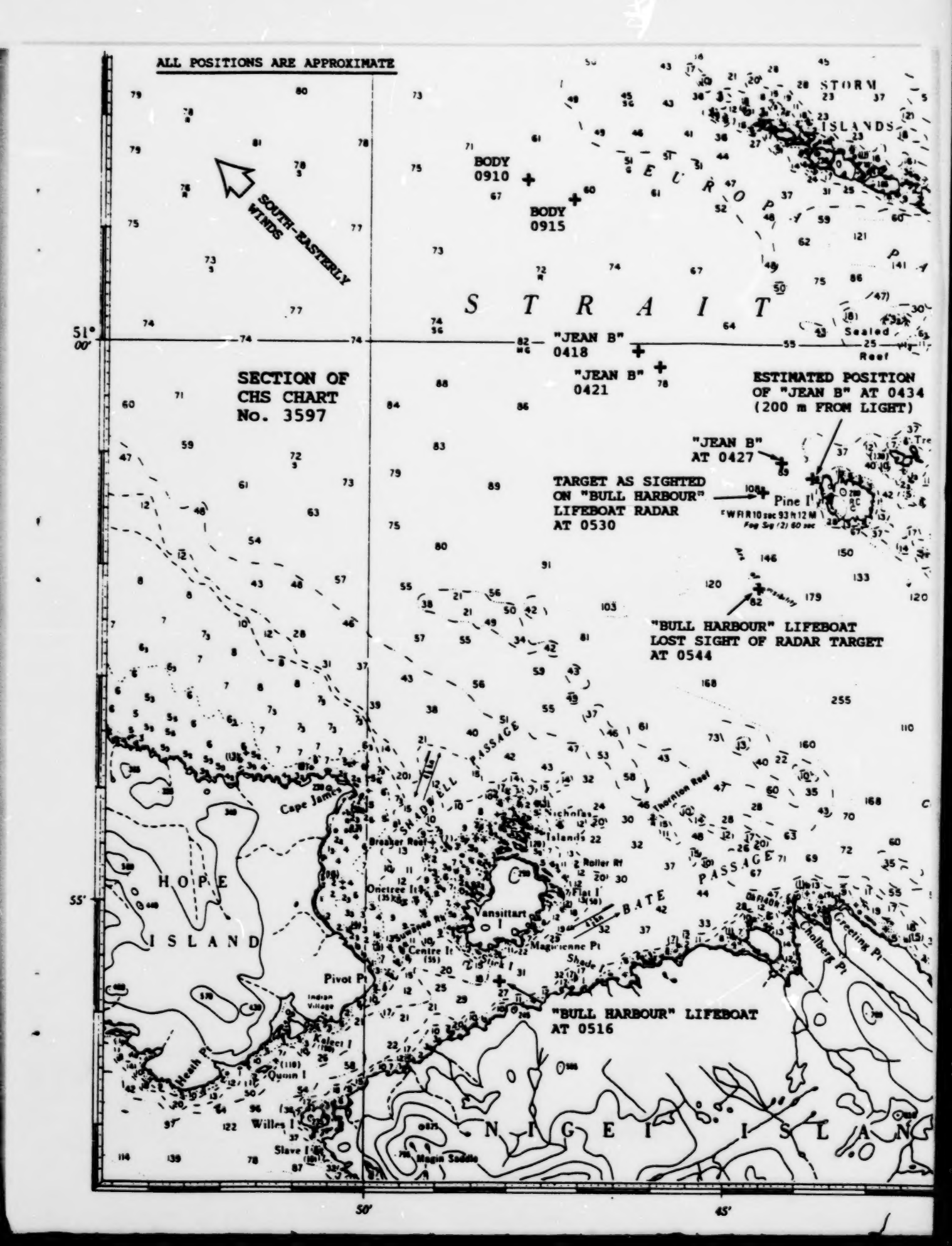
Other Findings

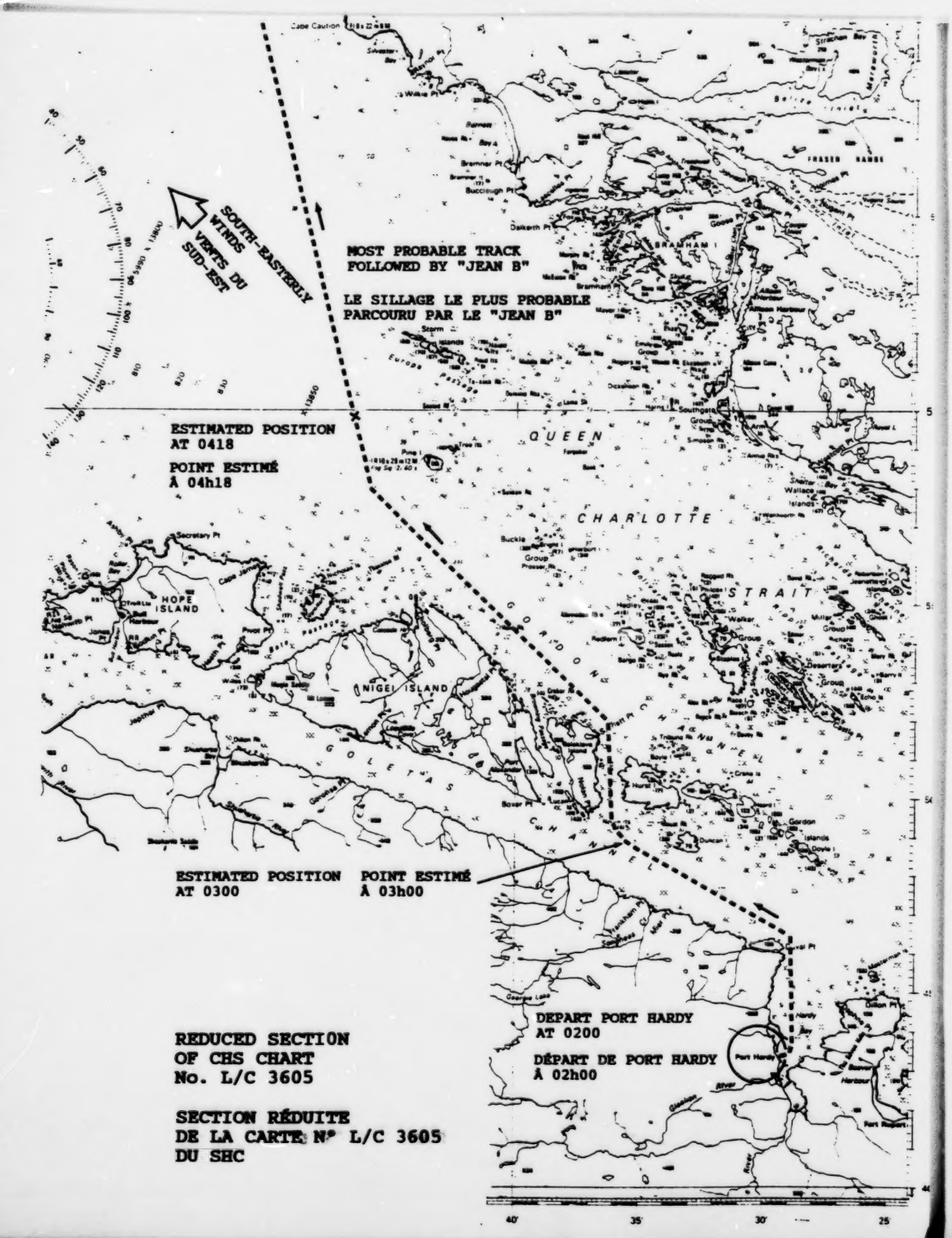
Had the three crewmembers been wearing approved immersion suits there is a strong possibility that all would have been saved.

OTTAWA, ONTARIO
NOVEMBER, 1986.

GLOSSARY

CCGC	Canadian Coast Guard Cutter
CGRS	Coast Guard Radio Station
CMB	Continuous Marine Broadcast
Datum Marker	A specially designed, high visibility buoy deployed to act as a drifting datum point for search craft
ETA	Estimated Time of Arrival
RCC	Rescue Co-ordination Centre
Scotsman	Local term to denote a small buoy used by fishermen to mark the position of their nets
UTC	Universal Co-ordinated Time


ALL POSITIONS ARE APPROXIMATE
SOUTH-EASTERLY WINDS
BODY 0910
BODY 0915
STORM ISLANDS
EUROPA
STRAIT
"JEAN B" 0418
"JEAN B" 0421
Sealed Reef
SECTION OF CHS CHART No. 3597
ESTIMATED POSITION OF "JEAN B" AT 0434 (200 m FROM LIGHT)
"JEAN B" AT 0427
TARGET AS SIGHTED ON "BULL HARBOUR" LIFEBOAT RADAR AT 0530
Pine I
"BULL HARBOUR" LIFEBOAT LOST SIGHT OF RADAR TARGET AT 0544
"BULL HARBOUR" LIFEBOAT AT 0516
51° 00'
55'
50'
45'
Cape James
Breaker Reef
Onetree It
Vansittart I
Centre It
Pivot Pt
Indian Village
Kelsey I
Quoin I
Heath Pt
Willes I
Slave I
Magin Saddle
HOPE ISLAND
SHADWELL PASSAGE
Thornton Reef
Roller Rf
Flat I
Magistrate Pt
Shade
BATE PASSAGE
Cholbert Pt
Greeting Pt
NIGEL ISLAND


SOUTH-EASTERLY WINDS
VENTS DU SUD-EST
MOST PROBABLE TRACK FOLLOWED BY "JEAN B"
LE SILLAGE LE PLUS PROBABLE PARCOURU PAR LE "JEAN B"
ESTIMATED POSITION AT 0418
POINT ESTIMÉ À 04h18
ESTIMATED POSITION AT 0300
POINT ESTIMÉ À 03h00
DEPART PORT HARDY AT 0200
DÉPART DE PORT HARDY À 02h00
QUEEN CHARLOTTE STRAIT
GOLETAS CHANNEL
HOPE ISLAND
NIGEI ISLAND
BRAMHAM I.
FRASER NARROWS
Port Hardy
REDUCED SECTION OF CHS CHART No. L/C 3605
SECTION RÉDUITE DE LA CARTE N° L/C 3605 DU SHC

ANNEX I

PART II

FISHING VESSELS NOT EXCEEDING FIFTEEN TONS, GROSS TONNAGE

Application

52. This Part applies to fishing vessels not exceeding 15 tons, gross tonnage, that are not sailing ships.

Life Saving Equipment, Lights and Signals

53. (1) In this section, ''approved'', when used in reference to an article, means that the article has been built in accordance with the standards therefor in the Life Saving Equipment Regulations and has been approved by the Board.

(2) Every fishing vessel not exceeding 12.2 m in length shall carry

(a) one approved life jacket for each person on board;

(b) one approved lifebuoy fitted with 27 m of line; and

(c) one watertight can containing six approved self-igniting flares.

(3) Every fishing vessel exceeding 12.2 m in length shall carry

(a) one approved life jacket for each person on board;

(b) a sufficient number of lifeboats, boats, dories, skiffs or seine skiffs to accommodate all persons on board the vessel; and

(c) one watertight can containing six approved self-igniting red flares.

(4) Every fishing vessel shall carry sufficient lights and equipment to comply with the Collision Regulations, and such lights shall be oil or electric.

ANNEX II

CANADA SHIPPING ACT

Ship Station Technical Regulations

Qualified Operators

65. (1) Every MF radiotelegraph installation shall be operated by an operator, holding a First or Second Class Radiotelegraph Operator's Certificate or a Radiocommunication Operator's General Certificate for the Maritime Mobile Service.

(2) Subject to subsection (3), every MF, combined MF/HF and every VHF radiotelephone installation shall be operated by a person described in subsection (1) or by a person holding a General Radiotelephone Operator's Certificate.

(3) The holder of a Restricted Radiotelephone Operator's Certificate may operate a radiotelephone installation referred to in subsection (2) if

(*a*) the operation of the transmitter requires only the use of simple external switching devices excluding all manual adjustment of frequency determining elements; and

(*b*) the peak envelope power of the transmitter does not exceed 1.5 kilowatts.

APPENDICE II

LOI SUR LA MARINE MARCHANDE DU CANADA

Règlement technique sur les stations (radio) de navires

Opérateurs qualifiés

65. (1) Les installations radiotélégraphiques MF doivent être exploitées par un opérateur titulaire d'un certificat de radiotélégraphiste de 1ᵉ ou de 2ᵉ classe ou d'un certificat général en radiocommunication pour le Service mobile maritime.

(2) Sous réserve du paragraphe (3), l'utilisation de toute installation radiotéléphonique MF, de toute installation radiotéléphonique combinée MF/HF et de toute installation radiotéléphonique VHF doit être confiée à une personne décrite au paragraphe (1) ou au titulaire d'un certificat général de radiotéléphoniste.

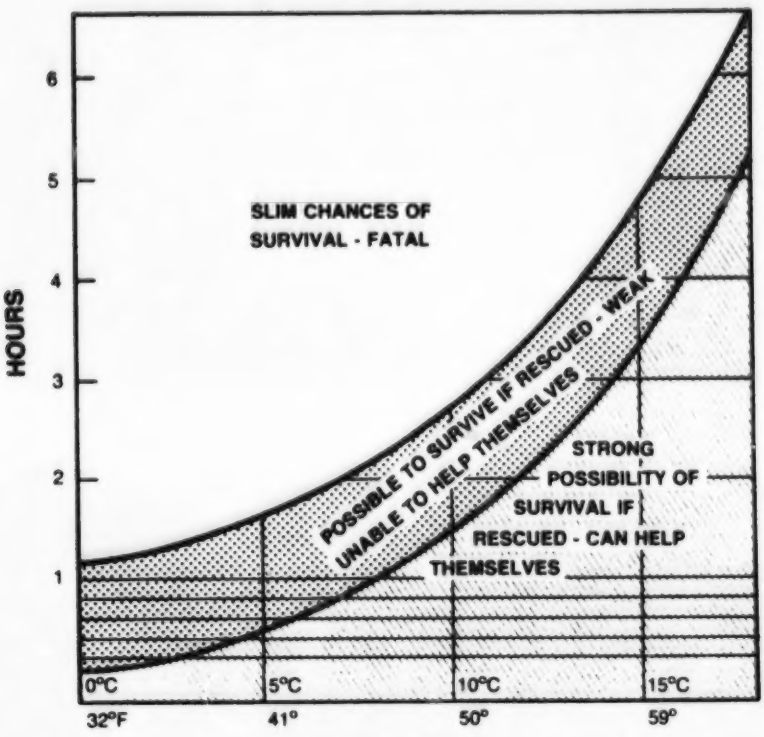
(3) Le titulaire d'un certificat restreint de radiotéléphoniste peut utiliser une des installations radiotéléphoniques visées au paragraphe (2) si,

a) pour faire fonctionner l'émetteur, il suffit d'utiliser des interrupteurs ou commutateurs extérieurs simples excluant tout réglage manuel des éléments qui déterminent la fréquence et

b) la puissance de crête de l'émetteur ne dépasse pas 1,5 kW.

ANNEX III

COLD WATER SURVIVAL



The accompanying graph shows average predicted survival times of average, adult humans in water of different temperatures. The figures are based on experimental cooling of average men and women who were holding still in ocean water and wearing a standard lifejacket and light clothing. The graph shows, for example, that predicted survival time is about 2½-3 hours in water of 10°C (50°F). Predicted survival time is increased by extra body fat and decreased by small body size. Although women generally possess slightly more fat than men they cool slightly faster due to their usually small body size. However, for comparable sizes, the man will cool faster.

"COLD WATER SURVIVAL"
CANADIAN RED CROSS

Troller - Similar to the "JEAN B"

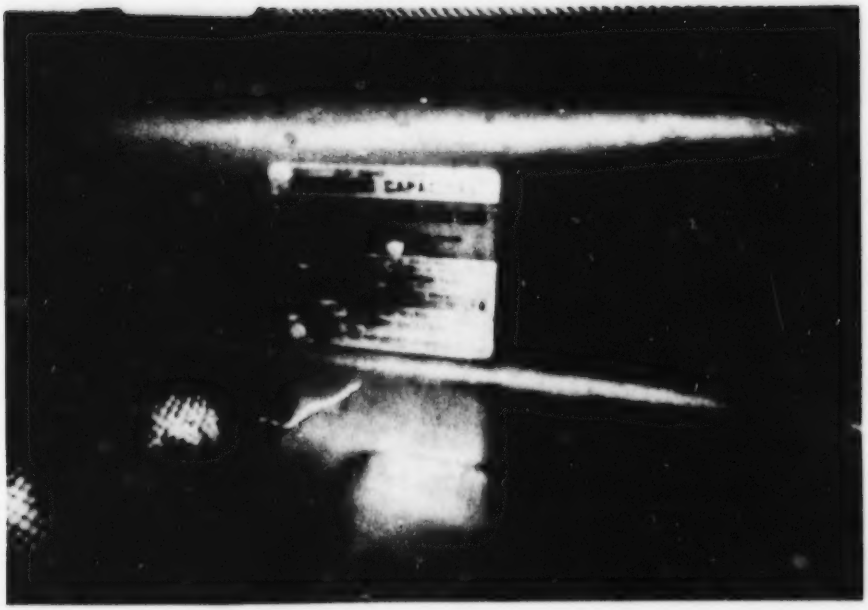
Bateau pour la pêche à la traîne semblable au "JEAN B"

NOTE: Photo dates should read "86" instead of "85"

À remarquer: on doit lire "86" au lieu de "85" sur les photos

Dinghy belonging to the "JEAN B"

Le youyou du "JEAN B"



Note maximum capacity for dinghy

À remarquer la capacité maximale du youyou

Troller -
Similar to
the "JEAN B"

Bateau
pour la pêche
à la traîne
semblable au
"JEAN B"

Part of cargo
on board the
"JEAN B"

Une partie
de la cargaison
à bord du
"JEAN B"